

Notes - Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

* Make sure that the equation $= 0$ before you start.

Ex: Solve $x^2 - 4x = -13$

$$x^2 - 4x + 13 = \text{☺}$$

$$a = 1 \quad b = -4 \quad c = 13$$

$$x = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(13)}}{2(1)}$$

$$x = \frac{4 \pm \sqrt{-36}}{2}$$

A. Discriminant
 $(-4)^2 - 4(1)(13)$
 $= -36$

B. $-36 < 0$
2 complex roots

c. $\frac{4 \pm 6i}{2} = \frac{2 \pm 3i}{1}$

Ex: of simplifying the last step $\frac{11 \pm 15}{2}$

$$\frac{11+15}{2} = \frac{26}{2} = 13$$

$$\frac{11-15}{2} = \frac{-4}{2} = -2$$